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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,395	04/01/2004	Roy C. Krohn	KRO 0131 PUSI	9594
22045	7590	04/04/2006	EXAMINER	
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			BERMAN, SUSAN W	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 04/04/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/816,395

Applicant(s)

KROHN, ROY C.

Examiner

Susan W. Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/23/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-19 and 22-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-19 and 22-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

The rejection of claims 29-30 under 35 U.S.C. 112, second paragraph, is withdrawn.

Response to Arguments

The rejection of claims as being unpatentable over Sack et al (4,309,486) is withdrawn in response to applicant's arguments. Applicant has submitted trade literature that identifies Sartomer "SR-206" as ethylene glycol methacrylate. The structure does not contain a linking group corresponding to R₂ in instant claim 1. It is agreed that Sack et al do not suggest a monomer of formula (I) set forth in the instant claims.

Applicant's arguments filed 06/30/2005 have been fully considered but are moot in view of the new ground(s) of rejection set forth below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 9-11, 13-19 and 22-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shustack (5,128,387) in view of Shaw et al (5,440,446).

Shustack discloses radiation curable coating compositions for metal comprising a bulky (meth)acrylate monomer, a mixture of urethane acrylate and epoxy acrylate oligomers, an adhesion promoter, an ethylenically unsaturated monomer of the formula set forth in column 5 wherein R₂ can be isobornyl or dicyclopentyl oxyethyl, waxes and a photoinitiator. See column 5, line 21, to column 6, line

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8, line 49. Shustack teaches that the viscosity of the preferred urethane acrylated oligomer is in the range from 2800-4200 cps (column 6, lines 29-41). The viscosity of the preferred epoxy diacrylate oligomer is about 2200 cps (column 7, lines 24-40). A polyester oligomer having a viscosity from 2000-3000 cps is taught in column 8, lines 19-36. Shustack does not teach adding a monomer of formula (I) set forth in instant claim 1; however, Shustack discloses homologous monomers, such as tripropylene glycol diacrylate, tetraethylene glycol diacrylate in column 6, lines 29-34 and lines 54-57.

Shaw et al disclose a radiation curable acrylate coating material for coating a metal layer on a dielectric substrate. Shaw et al teach mixing a very low and very high viscosity material to obtain flash evaporation, condensation and curing. One of the mixtures specifically taught is a mixture of 70% Henkel 4770 (an amine acrylate) and 30% diethylene glycol diacrylate (column 8, line 57, to column 9, line 48). Further advantages of including an amine acrylate are taught in column 9, lines 43-45. See column 6, line 19, to column 9, line 48. Shaw et al teach curing with ultraviolet radiation but do not specifically mention adding a photoinitiator. Waxes are not mentioned.

It would have been obvious to one skilled in the art at the time of the invention to employ the acrylate mixture of an amine acrylate and diethylene glycol diacrylate taught by Shaw et al in combination with the acrylate materials taught by Shustack to provide a coating material for metal substrates. Shustack provides motivation by teaching compositions comprising monomers homologous to diethylene glycol diacrylate, such as tripropylene glycol diacrylate or tetraethylene glycol diacrylate in combination with the disclosed acrylated urethane oligomers. Shaw et al provide motivation by teaching that diethylene glycol diacrylate is one of ten diacrylates that can be included in the composition in column 8, lines 6-32. Shaw et al provide additional motivation by teaching that diethylene glycol diacrylate can be used in combination with a higher viscosity amine acrylate to provide a mixture for flash evaporation, condensation and curing on the metal substrate (column 8, line 50, to column 9, line 36). One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable

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expectation of providing a useful coating composition combining the advantages of the components taught by Shustack and the advantages of the components taught by Shaw et al.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6, 9-19 and 22-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13, 15-25 and 27-30 of copending Application No. 10/703,938. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. The claims of '938 set forth the same components as are set forth in the instant claims except that the formula of the "acrylated monomer" is not specified as in the instant claims. Claims 28-30 of '938 sets forth an ethylene glycol dicyclopentyl ether acrylate.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shaw et al (6,218,004) disclose a radiation curable acrylate top coating for coating a metal layer of a sheet material. See column 15, line 25, to column 17, line 36.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB
3/31/06



Susan W Berman
Primary Examiner
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